

In the Claims:

Please amend claims 1, 2, 6, 7, 11 and 12 as indicated below.

1. (Currently amended) A computer-implemented method, comprising:

in response to a metadata server receiving a data access request from a client, the metadata server:

determining a maximum expiration time indicated by a next scheduled time for exclusive access;

wherein the data access request is for data that is also accessible by one or more other clients each having a corresponding unexpired token, and wherein said time for exclusive access is a time when exclusive access to the data is required by a task;

generating an access token that grants the client access to data stored on one or more storage devices associated with the metadata server, wherein the access token comprises an expiration time; and

wherein said generating an access token comprises setting the expiration time of the access token to [[be]] no later than the maximum expiration time indicated by the next scheduled time for exclusive access, such that the access token will be expired during the next scheduled time for exclusive access, thus preventing the client from using the access token to access the data during the next scheduled time for exclusive access.

2. (Currently amended) The computer-implemented method of claim 1, further comprising:

determining a default expiration time; and

if the default expiration time is earlier than the maximum expiration time, setting the expiration time of the access token to [[bc]] the default expiration time.

3. (Previously presented) The computer-implemented method of claim 1, further comprising the metadata server providing the access token to the client.

4. (Previously presented) The computer-implemented method of claim 3, further comprising:

a storage device receiving a data I/O request associated with the access token;

comparing a current system time with the access token's expiration time;

denying the data I/O request if the current system time is later than the access token's expiration time.

5. (Previously presented) The computer-implemented method of claim 4, wherein:

the client is one of a plurality of clients;

the access token is one of a plurality of access tokens;

each of the access tokens is provided to a respective one of the plurality of clients;
and

wherein at the next scheduled time for exclusive access the plurality of access tokens are expired without the metadata server transmitting a message to each client to expire its respective access tokens.

6. (Currently amended) A system, comprising:

a processor and a memory storing program instructions executable by the processor to implement a metadata server, wherein the metadata server is configured to:

determine a maximum expiration time indicated by a next scheduled time for exclusive access in response to receiving a data access request from a client;

wherein the data access request is for data that is also accessible by one or more other clients each having a corresponding unexpired token, and wherein said time for exclusive access is a time when exclusive access to the data is required by a task;

generate an access token that grants the client access to data stored on one or more storage devices associated with the metadata server, wherein the access token comprises an expiration time; and

set the expiration time of the access token to [[be]] no later than the maximum expiration time such that the access token will be expired during the next scheduled time for exclusive access, thus preventing the client from using the access token to access the data during the next scheduled time for exclusive access.

7. (Currently amended) The system of claim 6, wherein the metadata server is further configured to:

determine a default expiration time; and

set the expiration time of the access token to [[be]] the default expiration time if the default expiration time is earlier than the maximum expiration time.

8. (Original) The system of claim 6, further comprising a storage device, wherein the storage device is configured to:

receive a data I/O request associated with the access token;

compare a current system time with the access token's expiration time; and

deny the data I/O request if the current system time is later than the access token's expiration time.

9. (Previously presented) The system of claim 8, wherein the metadata server is further configured to:

provide the access token to the client.

10. (Previously presented) The system of claim 9, wherein:

the access token is one of a plurality of access tokens; and

wherein the metadata server is further configured to:

provide one access token of the plurality of access tokens to a respective one of a plurality of clients; and

wherein at the next scheduled time for exclusive access the plurality of access tokens are expired without the metadata server transmitting a message to each client to expire its respective access tokens.

11. (Currently amended) A computer-readable, storage medium having stored program instructions that when executed by a computer implement:

a metadata server determining a maximum expiration time indicated by a next scheduled time for exclusive access;

generating an access token that grants a client access to data stored on one or more storage devices associated with the metadata server, wherein the access token comprises an expiration time, wherein the data is also accessible by one or more other clients each having a corresponding unexpired token, and wherein said time for exclusive access is a time when exclusive access to the data is required by a task; and

setting the expiration time of the access token to [[be]] no later than the maximum expiration time such that the access token will be expired during the next scheduled time for exclusive access, thus preventing the client from using the access token to access the data during the next scheduled time for exclusive access.

12. (Currently amended) The computer-readable, storage accessible medium of claim 11, wherein the program instructions are further computer-executable to implement:

determining a default expiration time; and

if the default expiration time is earlier than the maximum expiration time, setting the expiration time of the access token to [[be]] the default expiration time.

13. (Previously presented) The computer-readable, storage accessible medium of claim 11, wherein the program instructions are further computer-executable to implement:

receiving a data I/O request associated with the access token;

comparing a current system time with the access token's expiration time; and

denying the data I/O request if the current system time is later than the access token's expiration time.

14. (Previously presented) The computer-readable, storage accessible medium of claim 13, wherein the program instructions are further computer-executable to implement:

receiving a data access request from the client; and

providing the access token to the client.

15. (Previously presented) The computer-readable, storage medium of claim 14, wherein:

the client is one of a plurality of clients;

the access token is one of a plurality of access tokens;

each of the access tokens is provided to a respective one of the plurality of clients;
and

wherein at the next scheduled time for exclusive access the plurality of access tokens are expired without the metadata server transmitting a message to each client to expire its respective access tokens.

16. (Previously presented) A system, comprising:

means for determining a default expiration time;

means for setting the expiration time of an access token to the earlier of either a maximum expiration time indicated by a next scheduled time for exclusive access or the default expiration time, wherein the access token grants a client access to data stored on one or more storage devices associated with a metadata server, and wherein the access token is set such that the access token will be expired during the next scheduled time for exclusive access, thus preventing the client from using the access token to access the data during the next scheduled time for exclusive access;

means for receiving a data I/O request associated with the access token, wherein the data I/O request is for data that is also accessible by one or more other clients each having a corresponding unexpired token, and wherein said time for exclusive access is a time when exclusive access to the data is required by a task;

means for comparing a current system time with the access token's expiration time; and

means for denying the data I/O request if the current system time is later than the access token's expiration time.